

In the Specification:

Please amend paragraphs [0016] and [0056] of the specification as shown.

[0016] Other processes have been developed for synthesizing mesoporous silica spheres in acidic solution (e.g., U.S. Pat. No. 6,334,988 (Gallis *et al.*), Ozin *et al.*, *J. Mater. Chem.* 8(3):743-750 (1998)); Stucky Schacht *et al.*, *Science* 273:768-771 (1996)) describing an emulsion process for synthesizing mesoporous silica spheres). A silicon alkoxide (TEOS) was dissolved in an organic solvent, typically mesitylene, and the mixture was slowly added to an aqueous acidic solution containing a cationic ammonium surfactant (CTAB). Stucky Schacht found that by varying the stir rate during the course of the reaction, the particle morphology could be changed. At slower stirring rates, the reaction mixture produced microspheres and some transient solid fibers; however, as the stirring rate was increased, the amount of fibers decreased with the increasing amounts of spheres. Scanning Electron Microscopy (SEM) indicated the final particles were hollow and spherical in nature. It was shown that these hollow spheres were brittle, and could be crushed with a spatula. However, the brittle nature of the spheres, in combination with the fact that they were not porous throughout their interior, were unfavorable characteristics for use as a chromatographic matrix.

[0056] The mesoporous fibers in the present technology are prepared by an emulsion process using highly acidic conditions. Source materials contain halide ions, cationic surfactant and alkoxyisilane in the case when silica is desired as the fiber constituent. (In alternative embodiments other fibers, e.g., TiO₂, ZrO₂ use source materials other than alkoxyisilane, see e.g., materials used by Stucky Schacht *et al.*, 1996). When alkoxyisilane (from 3 to 5° C.) is used, it provides the source of positively charged inorganic species of silica under highly acidic conditions. Halide ions are preferably bromides and/or chlorides. Surfactants control the interaction between these charged inorganic species. Preferred surfactants are for example, without intended limitation, cationic surfactants, such as CTAB (cetyltrimethylammonium bromide), CTAC (cetyltrimethyl ammonium chloride), DTAB (dodecyltrimethylammonium bromide), and DTAC (dodecyltrimethylammonium chloride). Neither catalysts, nor exogenous energy sources, such as heat, microwave or irradiation have been used in this process, but either

could be used in combination with alternative embodiments of the methods of the present invention to enhance the intended formulation or rate of reaction to form the fibers.